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# **WATER SUPPLY OUTLOOK FOR COLORADO AND NEW MEXICO**

and  
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE---SOIL CONSERVATION SERVICE  
and

COLORADO AGRICULTURAL EXPERIMENT STATION  
STATE ENGINEER of COLORADO  
and STATE ENGINEER of NEW MEXICO

Data included in this report were obtained by the agencies named above in cooperation with the Bureau of Reclamation, U.S. Forest Service, National Park Service, Corps of Engineers and other Federal, State, and private organizations.

AS OF  
FEB. 1, 1969

## TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

## PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85205
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80521
Idaho	P. O. Box 38, Boise, Idaho 83707
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Building, Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 340, Casper, Wyoming 82602

## PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



# **WATER SUPPLY OUTLOOK FOR COLORADO AND NEW MEXICO**

and  
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

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### WATERSHED II - ARKANSAS RIVER WATERSHED

Describes water supply conditions in Lake County, Upper Arkansas, Fremont, Custer County Divide, Fountain Valley, Black Squirrel, Horse-Rush Creek, Central Colorado, Turkey Creek, Pueblo, Bessemer, Olney Boone, Cheyenne, Upper Huerfano, Stonewall, Spanish Peaks, Purgatoire, Branson Trinchera, Western Baca County, Southeastern Baca County, Two Buttes, Bent, Timpas, Northeast Prowers, Prowers, West Otero, East Otero, and Big Sandy Soil Conservation Districts.

### WATERSHED III - RIO GRANDE WATERSHED (COLORADO)

Describes water supply conditions in Rio Grande, Center, Mosca Hooper, Mt. Blanca, Sanches, and Culebra Soil Conservation Districts.

### WATERSHED IV - RIO GRANDE WATERSHED (NEW MEXICO)

Describes water supply conditions in Lower Cebolla, Abiquiu-Vallecitos, Eastern Taos, Lindrith, Coyote-Canones, Espanola Valley, Pojoaque, Jemez, Santa Fe-Sandoval, Tijeras, Cuba, and Edgewood Soil Conservation Districts.

### WATERSHED V - DOLORES, SAN JUAN, AND ANIMAS RIVERS WATERSHED

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Describes water supply conditions in Delta, Gunnison, Cimarron, Shavano, and Uncompahgre Soil Conservation Districts.

### WATERSHED VII - COLORADO RIVER WATERSHED

Describes water supply conditions in DeBeque, Lower Grand Valley, Bookcliff, Eagle County, Middle Park, Glade Park, Upper Grand Valley, Plateau Valley, South Side, and Mt. Sopris Soil Conservation Districts.

### WATERSHED VIII - YAMPA, WHITE AND NORTH PLATTE RIVERS WATERSHED

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Describes water supply conditions in Sedgwick, South Platte, Haxton, Peetz, Padroni, Morgan, Rock Creek, and Yuma Soil Conservation Districts.

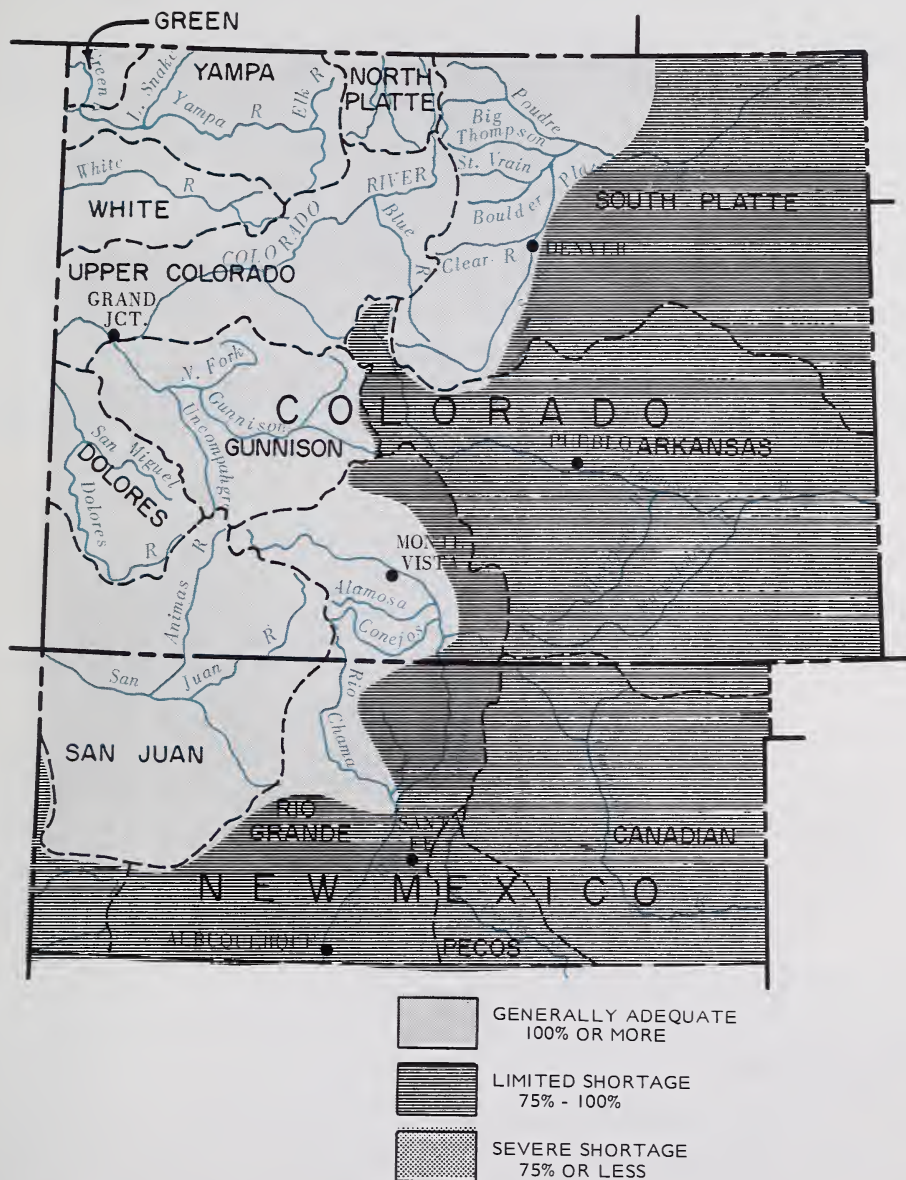
### APPENDIX I - SNOW SURVEY MEASUREMENTS

### APPENDIX II - SOIL MOISTURE MEASUREMENTS

# WATER SUPPLY OUTLOOK

as of

February 1, 1969



The map on this page indicates the most probable water supply as of the date of this report. Estimates assume average conditions of snow fall, precipitation and other factors from this date to the end of the forecast period. As the season progresses accuracy of estimates improve. In addition to expected streamflow, reservoir storage, soil moisture in irrigated areas, and other factors are considered in estimating water supply. Estimates apply to irrigated areas along the main streams and may not indicate conditions on small tributaries.

## WATER SUPPLY CONDITIONS

as of

February 1, 1969

SNOW ON THE WEST SIDE OF THE FRONTAL RANGE IN BOTH COLORADO AND NEW MEXICO IS EXCELLENT. PACK IS RANGING UP TO 150% OF NORMAL. SNOWFALL ON THE EAST OF THE RANGE IS NEAR NORMAL TO SLIGHTLY BELOW.

RESERVOIR STORAGE IS FAIR IN BOTH STATES EXCEPT THE ARKANSAS DRAINAGE IN COLORADO, HERE CARRY-OVER IS ONLY ABOUT 30% OF NORMAL. SOIL MOISTURE IN THE IRRIGATED AREAS OF THE FRONTAL RANGE IS ONLY FAIR TO THE WEST IT IS GOOD.



-- SNOW PACK ON THE EASTERN SLOPE OF COLORADO IS NORMAL TO SLIGHTLY BELOW, WHILE THE WESTERN SLOPE HAS AN EXCELLENT SNOW PACK. THE RIO GRANDE BASIN IS NEAR NORMAL. SOIL MOISTURE CONDITIONS IN THE MOUNTAIN IS NEAR NORMAL. THE WESTERN SLOPE'S VALLEY SOILS ARE REPORTED TO BE IN GOOD CONDITION. IRRIGATED AREAS ON THE EASTERN SLOPE AND SAN LUIS VALLEY REPORT POOR TO FAIR CONDITIONS. CARRY-OVER STORAGE IS GENERALLY GOOD EXCEPT IN THE ARKANSAS BASIN WHERE THERE IS ONLY 30% OF NORMAL STORAGE.



-- NEW MEXICO SNOW PACK VARIES WIDELY. THE SNOW ON THE RIO GRANDE, PECOS AND CANADIAN IS NORMAL TO SLIGHTLY BELOW. THE SAN JUAN AND CHAMA WATERSHEDS HAVE EXCELLENT SNOW PACKS AND SHOULD HAVE ADEQUATE WATER SUPPLIES THIS SUMMER. SOME OF THE SNOW COURSES ON THE CHAMA WATERSHED ARE APPROACHING A MAXIMUM OF RECORD. CARRY-OVER STORAGE IS SLIGHTLY BELOW NORMAL, BUT BETTER THAN LAST YEAR. NAVAJO RESERVOIR IS APPROACHING CAPACITY. VALLEY SOIL MOISTURE IS REPORTED TO BE ONLY FAIR IN MOST OF THE IRRIGATED AREAS.

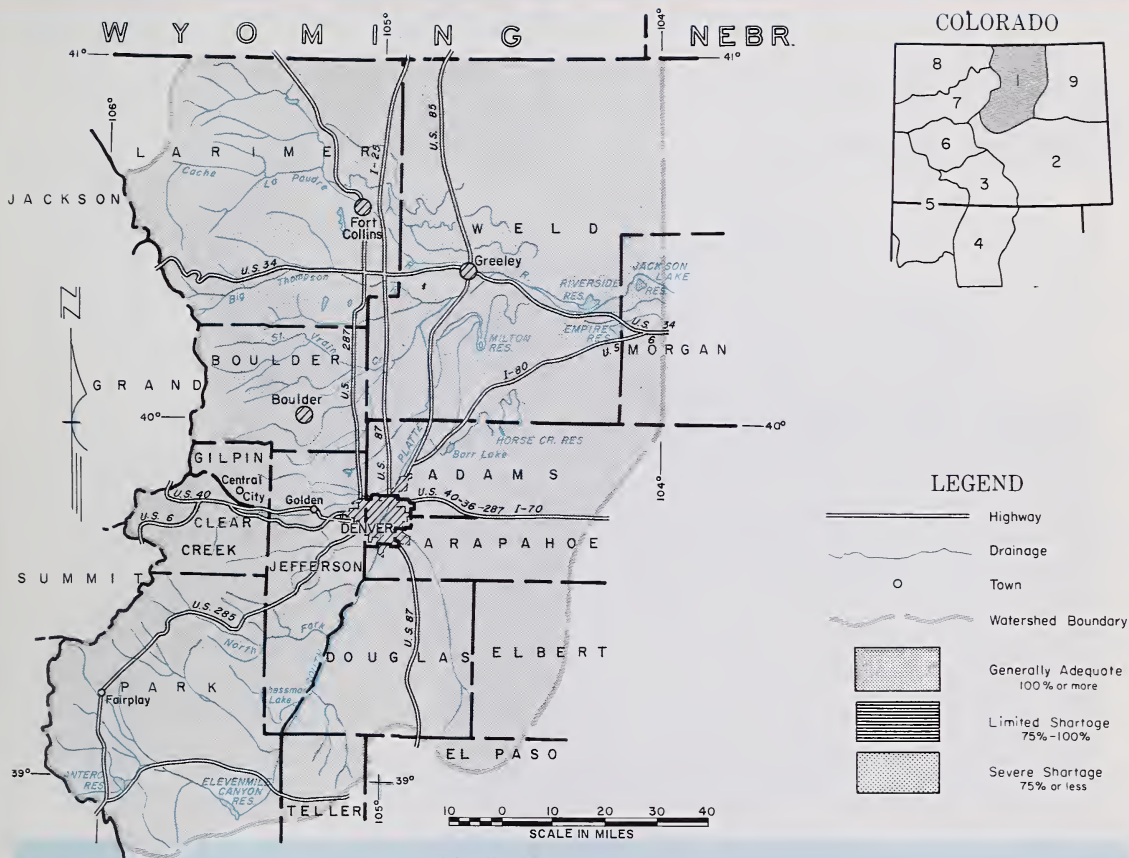


# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE SOUTH PLATTE RIVER WATERSHED IN COLORADO

as of

February 1, 1969

**U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE**  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



## YOUR WATER SUPPLY

THE SOUTH PLATTE AND ITS MAJOR TRIBUTARIES TO THE NORTH HAVE ABOUT NORMAL SNOW COVER. THE CACHE LA POUDRE HAS SLIGHTLY BETTER SNOW PACK WITH 127% OF NORMAL. RESERVOIR STORAGE IN THE MAJOR RESERVOIRS IS 120% OF NORMAL AND WILL BE AN EXCELLENT SUPPLEMENT. MOUNTAIN SOIL MOISTURE IS NEAR NORMAL. VALLEY SOILS ARE REPORTEDLY IN ONLY FAIR CONDITION. ADDITIONAL SNOW IS NEEDED TO INSURE ADEQUATE WATER SUPPLIES THIS SUMMER.

This report prepared by  
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DENVER, COLORADO DENVER, COLORADO

*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1,000 Ac. Ft.)

# WATER SUPPLY OUTLOOK expressed "Poor, Avg, Good"

STREAM and STATION	FORE CAST	THIS YEAR % AVE.	15 YR. AVE. 1953-67
No Numerical Forecasts Issued until March 1, 1969			
(1) Observed flow minus trans-basin diversions. (2) Observed flow plus by-pass to power plants. (3) Observed flow minus diversions through Jones Pass.			

STREAM	FLOW PERIOD	
	April May	June Thru Sept.
Bear Creek	Avg.	Avg.
Coal Creek	Avg.	Avg.
Deer Creek	Avg.	Avg.
North Fork of So. Platte	Avg.	Avg.
North Fork of Cache La Poudre	Good	Avg.
Ralston Creek	Avg.	Avg.
Rock Creek	Good	Avg.

## SUMMARY of SNOW MEASUREMENTS

RIVER	NUMBER of COURSES AVERAGED	THIS YEARS SNOW AS PERCENT OF	
		Last Year	Average
Boulder	2	71	91
Big Thompson	5	99	105
Cache La Poudre	6	113	127
Clear Creek	6	109	109
Saint Vrain	2	81	108
South Platte	2	100	100

## AVAILABLE SOIL MOISTURE

RIVER BASIN	NUMBER of STATIONS	THIS YEARS MOISTURE AS PERCENT OF	
		Last Year	Average
South Platte	2	99	93
Clear Creek	2	80	86
Boulder	1	75	105
Saint Vrain	2	77	100
Big Thompson	3	89	91
Cache La Poudre	2	94	85

## RESERVOIR STORAGE (1,000 Ac. Ft.) Measured First of Month

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Antero	33.0	16.0	15.9	10.6
Barr Lake	32.2	18.4	21.9	17.6
Black Hollow	8.0	3.7	3.5	3.3
Boyd Lake	44.0	38.3	40.8	27.6
Cache La Poudre	9.5	3.9	7.1	6.6
Carter Lake	108.9	79.5	85.2	61.9
Chambers Lake	8.8	2.3	2.8	2.3
Cheeseman	79.0	39.8	38.4	45.6
Cobb Lake	34.3	14.9	20.0	9.9
Eleven Mile	97.8	95.0	92.3	72.0
Fossil Creek	11.6	5.2	5.3	5.4
Gross	43.1	34.1	30.4	24.9

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Halligan	6.4	3.6	3.4	3.1
Horsetooth	143.5	90.2	85.4	81.2
Lake Loveland	14.3	5.0	11.2	7.9
Lone Tree	9.2	1.8	8.4	6.0
Mariano	5.4	4.8	5.1	3.7
Marshall	10.3	1.8	4.7	2.1
Marston	18.0	14.7	15.3	14.1
Milton	24.4	14.2	14.0	9.0
Standley	18.5	18.1	26.2	7.9
Terry Lake	8.2	4.5	6.2	4.6
Union	12.7	3.3	11.5	7.8
Windsor	18.6	9.2	12.1	7.6

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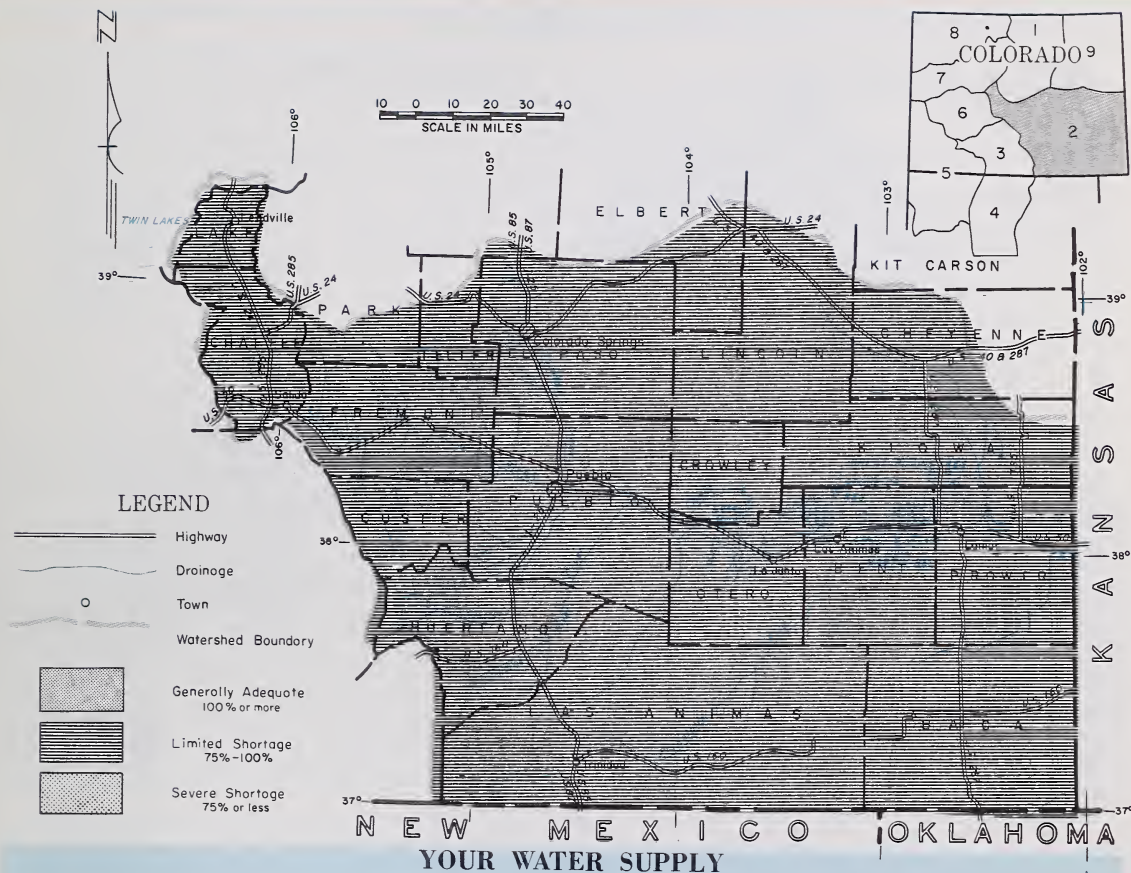


# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE ARKANSAS RIVER WATERSHED IN COLORADO

as of

February 1, 1969

**U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE**  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



CURRENT SNOWFALL IN THE UPPER ARKANSAS IS ABOUT 115% OF THE 1953-67 AVERAGE. SNOWFALL IN THE CUCHARAS AND PURGATORIE RIVERS IS ONLY 75% OF THE AVERAGE. RESERVOIR STORAGE IS FAR BELOW LAST YEAR AND THE 1953-67 AVERAGE. MOUNTAIN SOIL MOISTURE IS BELOW AVERAGE. SOIL MOISTURE IN THE IRRIGATED AREAS IS FAIR. BECAUSE OF POOR CARRY-OVER STORAGE AND LESS THAN NORMAL SOIL MOISTURE MUCH ADDITIONAL SNOW IS NEEDED TO MEET ALL THE WATER NEEDS THIS SUMMER.

This report prepared by  
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DENVER, COLORADO LA JUNTA, COLORADO

*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1,000 Ac. Ft.) Apr-Sept

STREAM and STATION	FORE CAST	THIS YEAR %AVE.	15 YR. AVE. 1953-67
No Numerical Forecasts Issued until March 1, 1969			
(4) Observed flow plus change in Clear Creek, Twin Lakes, and Sugar Loaf Reservoirs minus diversions through Busk - Ivanhoe and Twin Lake Tunnels and Ewing, Front Pass, Wurtz and Columbine ditches.			

# WATER SUPPLY OUTLOOK expressed "Poor, Avg, Good "

STREAM	FLOW PERIOD	
	April May	June Thru Sept.
Apishapa	Avg.	Poor
Fountain Creek	Avg.	Avg.
Grape Creek	Avg.	Avg.
Hardscrable Creek	Avg.	Avg.
Huerfano	Avg.	Poor
Monument Creek	Avg.	Avg.

## SUMMARY of SNOW MEASUREMENTS

RIVER	NUMBER of COURSES AVERAGED	THIS YEARS SNOW AS PERCENT OF	
		Last Year	Average
Arkansas	7	124	116
Cucharas and Purgatorie	1	75	77

## AVAILABLE SOIL MOISTURE

RIVER BASIN	NUMBER of STATIONS	THIS YEARS MOISTURE AS PERCENT OF	
		Last Year	Average
Arkansas	3	55	77
Cucharas and Purgatorie	1	100	139

## RESERVOIR STORAGE (1,000 Ac. Ft.) Measured First of Month

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Adobe Creek	61.6	0.0	7.6	11.5
Clear Creek	11.4	7.8	8.1	6.6
Cucharas	40.0	0.7	0.0	6.9
Great Plains	150.0	6.3	53.7	26.9
Horse Creek	26.9	0.0	0.4	4.6

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
John Martin	353.9	11.8	33.0	81.5
Meredith	41.9	0.0	21.0	5.7
Model	15.0	1.5	0.0	2.6
Turquoise	130.0	22.1	13.2	6.9
Twin Lakes	57.9	25.0	30.7	19.7

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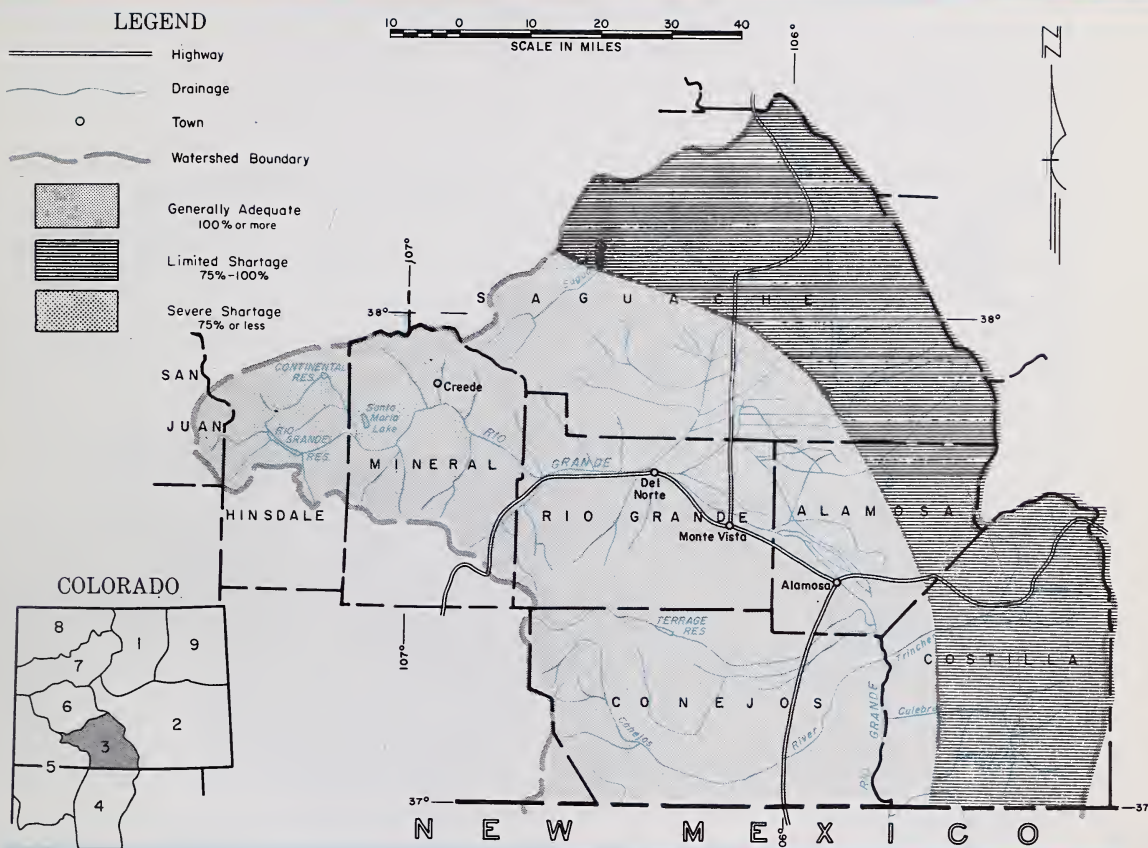


# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE UPPER RIO GRANDE WATERSHED IN COLORADO

as of

February 1, 1969

**U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE**  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



THIS WATERSHED HAS ONE OF THE BEST SNOW PACKS AND ONE OF THE WORST. THE HIGH ELEVATION SNOW PACK ON THE MAINSTEM IS 130% OF NORMAL, WHILE THE STREAMS ORIGINATING IN THE SANGRE DE CRISTO MOUNTAINS HAS ONLY A 70% SNOW COVER. MOUNTAIN SOIL MOISTURE IS NEAR NORMAL FOR THIS TIME OF YEAR. CARRY-OVER STORAGE IS CONSIDERABLY BETTER THAN LAST YEAR AND 132% OF THE 15 YEAR AVERAGE.

NUMERICAL FORECASTS ARE NOT ISSUED FEBRUARY FIRST, BUT AT LEAST A NORMAL RUNOFF IS EXPECTED ON THE MAINSTEM. THE ALAMOSA, AND CONEJOS RIVERS HAVE ABOVE NORMAL SNOW PACKS AND SHOULD FLOW ABOVE NORMAL.

This report prepared by  
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FORT COLLINS, COLORADO

Issued by  
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U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE  
DENVER, COLORADO OURANGO, COLORADO

*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1,000 Ac. Ft.) Apr - Sept

# WATER SUPPLY OUTLOOK expressed "Poor,Avg,Good "

STREAM and STATION	FORE CAST	THIS YEAR % AVE.	15 YR. AVE. 1953-67
No Numerical Forecasts Issued until March 1, 1969			
(5) Observed flow plus change in storage in Santa Maria, Rio Grande and Continental Reservoir. (6) Observed flow plus changes in storage in Sanchez Reservoir.			

STREAM	FLOW PERIOD	
	April May	June Thru Sept.
Saguache Creek	Poor	Poor
Sangre de Cristo Creek	Poor	Poor
Trinchera Creek	Poor	Poor

## SUMMARY of SNOW MEASUREMENTS

RIVER	NUMBER of COURSES AVERAGED	THIS YEARS SNOW AS PERCENT OF	
		Last Year	Average
Alamosa	2	111	135
Conejos	3	130	130
Culebra	2	65	71
Rio Grande	10	86	103

## AVAILABLE SOIL MOISTURE

RIVER BASIN	NUMBER of STATIONS	THIS YEARS MOISTURE AS PERCENT OF	
		Last Year	Average
Alamosa	2	91	88
Conejos	1	75	85
Culebra	2	103	126
Rio Grande	3	110	116

## RESERVOIR STORAGE (1,000 Ac. Ft.) Measured First of Month

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Continental	26.7	4.7	3.5	3.8
Platoro	60.0	3.0	3.0	7.1
Rio Grande	45.8	20.2	6.3	10.9

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Sanchez	103.2	11.8	12.4	10.6
Santa Maria	45.0	3.5	2.1	5.3
Terrace	17.7	11.2	6.8	3.5

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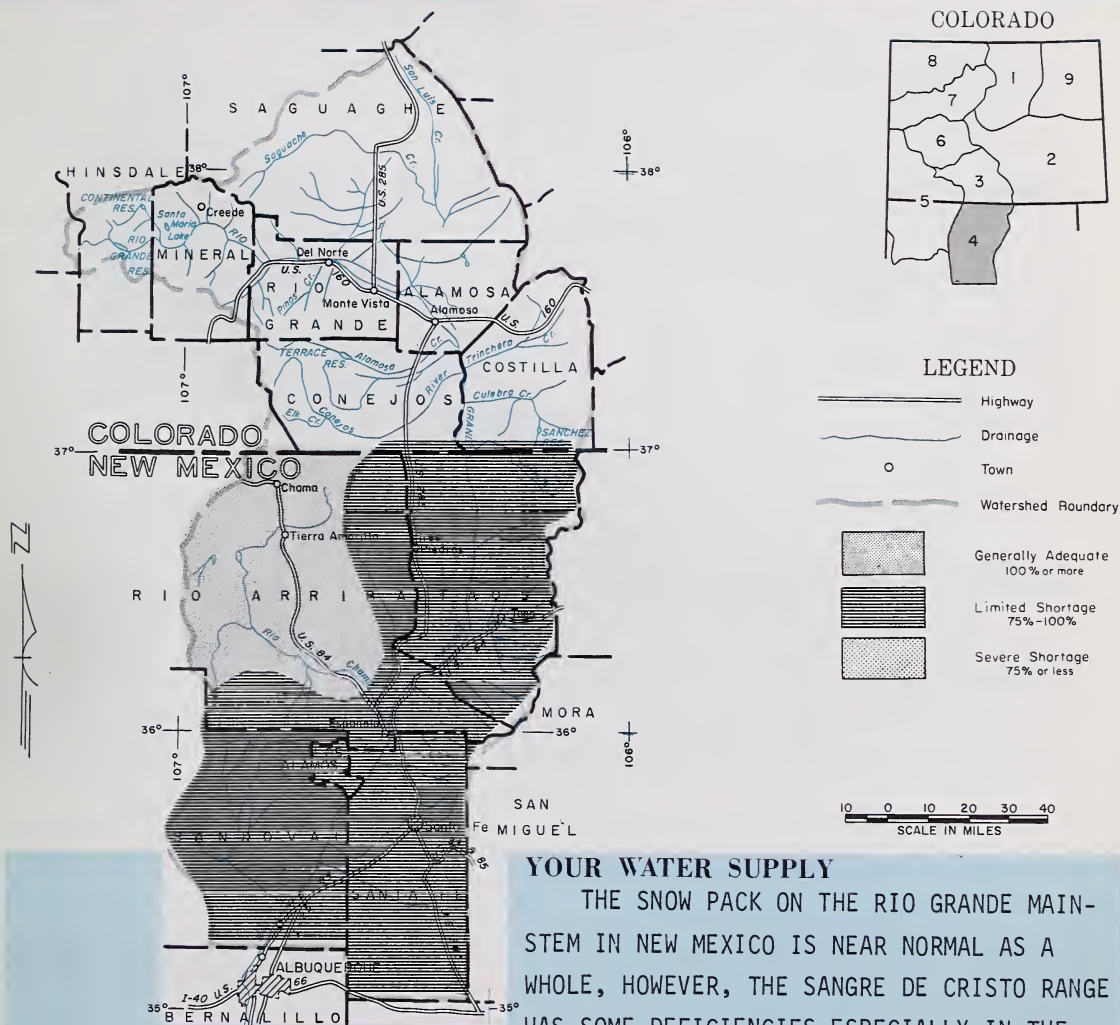
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# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE RIO GRANDE WATERSHED IN NEW MEXICO

as of  
February 1, 1969

**U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE**  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



## YOUR WATER SUPPLY

THE SNOW PACK ON THE RIO GRANDE MAIN-STEM IN NEW MEXICO IS NEAR NORMAL AS A WHOLE, HOWEVER, THE SANGRE DE CRISTO RANGE HAS SOME DEFICIENCIES ESPECIALLY IN THE NORTHERN PORTION OF THE STATE. THE RED RIVER, RIO HONDO AND PECOS RIVER DRAINAGES INDICATE LESS THAN NORMAL SNOW PACK. SOIL MOISTURE IS ALSO SOMEWHAT DEFICIENT IN THE MOUNTAIN AREAS. CARRY-OVER STORAGE IS SLIGHTLY BELOW NORMAL.

This report prepared by  
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FORT COLLINS, COLORADO

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ALBUQUERQUE, NEW MEXICO SANTA FE, NEW MEXICO

*The Conservation of Water begins with the Snow Survey*



# STREAMFLOW FORECASTS (1,000 Ac. Ft.)

STREAM and STATION	FORECAST AS INDICATED	THIS YEAR % AVE.	IS YR. AVE. 1953-67
No Numerical Forecasts Issued until March 1, 1969			

The Forecast of the Rio Grande at San Marcial is --% of the Average used by the Elephant Butte Irrigation District.  
A - S is April through September.  
A - J is April through July.  
M - J is March through July.  
(7) Observed flow plus changes in storage in El Vado and Abiquiu Res.  
(8) Observed flow plus changes in storage in Costilla Reservoir.

# WATER SUPPLY OUTLOOK expressed "Poor,Avg,Good "

STREAM	FLOW PERIOD	
	March May	June July
Embudo Creek	Avg.	Poor
Jemez River	Avg.	Poor
Mora River	Avg.	Poor
Nambe Creek	Avg.	Poor
Rio Ojo Caliente	Avg.	Poor
Rio Pueblo de Taos	Avg.	Poor
Santa Fe Creek	Avg.	Poor

## SUMMARY of SNOW MEASUREMENTS

RIVER	NUMBER of COURSES AVERAGED	THIS YEARS SNOW AS PERCENT OF	
		Last Year	Average
Pecos	1	63	85
Rio Chama	3	195	182
Rio Grande, N.M.	9	100	100
Rio Hondo	1	85	---
Red River	2	54	54

## AVAILABLE SOIL MOISTURE

RIVER BASIN	NUMBER of STATIONS	THIS YEARS MOISTURE AS PERCENT OF	
		Last Year	Average
Pecos	2	95	84
Rio Chama	2	84	155
Rio Grande	5	69	81
Red River	1	120	82

## RESERVOIR STORAGE ( 1,000 Ac. Ft. ) Measured First of Month

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	IS YEAR AVE. 1953-67
Alamogordo	111	67	65	73
Caballo	344	47	44	47
Conchas	273	121	182	163
Elephant Butte	2195	382	297	374

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	IS YEAR AVE. 1953-67
Elvado	195	1	1	4
McMillan-Avalon	32	7	10	19
Red Bluff (Tex)	307	57	101	--

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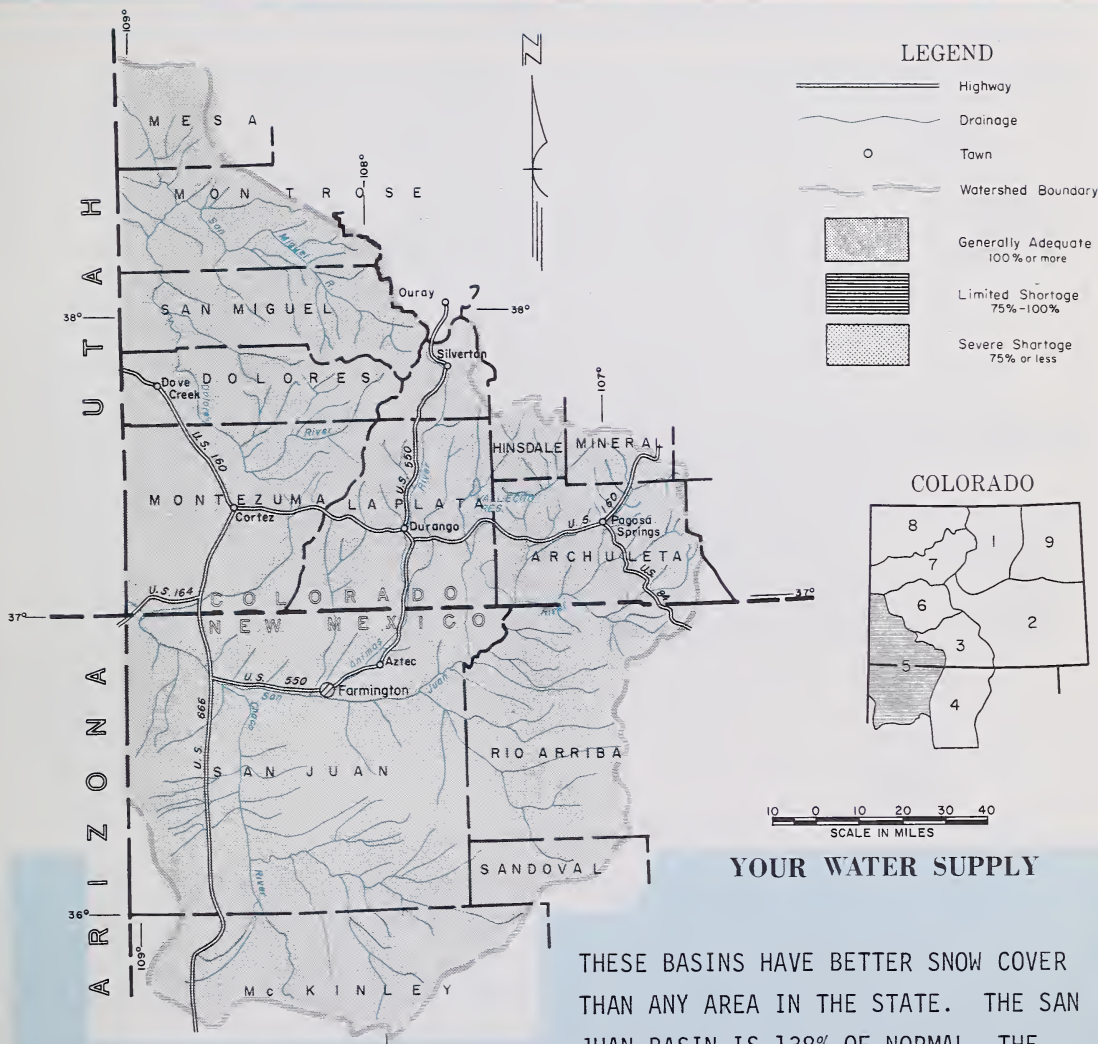


# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE SAN MIGUEL, DOLORES, ANIMAS, SAN JUAN WATER- SHEDS IN COLORADO AND NEW MEXICO

as of

February 1, 1969

U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



THESE BASINS HAVE BETTER SNOW COVER THAN ANY AREA IN THE STATE. THE SAN JUAN BASIN IS 138% OF NORMAL, THE ANIMAS 149%, AND THE DOLORES IS 158%. RESERVOIR STORAGE IN THE SMALL RESERVOIRS IS 150% OF NORMAL AND NAVAJO NOW CONTAINS 964,500 ACRE-FEET WHICH IS NEARLY CAPACITY. SOIL MOISTURE IS DEFICIENT AND WILL TEND TO REDUCE RUNOFF.

This report prepared by  
JACK N. WASHICHEK and RONALD E. MORELAND  
SOIL CONSERVATION SERVICE, COLORADO STATE UNIVERSITY  
FORT COLLINS, COLORADO

Issued by  
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SANTA FE, NEW MEXICO

*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1,000 Ac. Ft.) Apr-Sept

STREAM and STATION	FORECAST	THIS YEAR % AVE.	15 YR. AVE. 1953-67
No Numerical Forecasts Issued until March 1, 1969			
(9) Observed flow plus changes in storage in Vallecito Reservoir.			

# WATER SUPPLY OUTLOOK expressed "Poor, Avg, Good"

STREAM	FLOW PERIOD	
	April May	June Thru Sept.
Florida	Good	Good
Mancos	Good	Good
San Miguel	Good	Good

## SUMMARY of SNOW MEASUREMENTS

RIVER	NUMBER of COURSES AVERAGED	THIS YEARS SNOW AS PERCENT OF	
		Last Year	Average
Animas	6	121	149
Dolores	4	121	158
San Juan	5	129	138

## AVAILABLE SOIL MOISTURE

RIVER BASIN	NUMBER of STATIONS	THIS YEARS MOISTURE AS PERCENT OF	
		Last Year	Average
Animas	3	53	58
Dolores	3	61	76
San Juan	2	68	73

## RESERVOIR STORAGE (1,000 Ac. Ft.) Measured First of Month

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Groundhog	21.7	12.5	12.0	6.6
Lemon	40.0	22.0	16.3	14.4
Navajo	1036.0	964.5	592.0	282.5
Vallecito	126.3	66.9	66.9	46.0

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67

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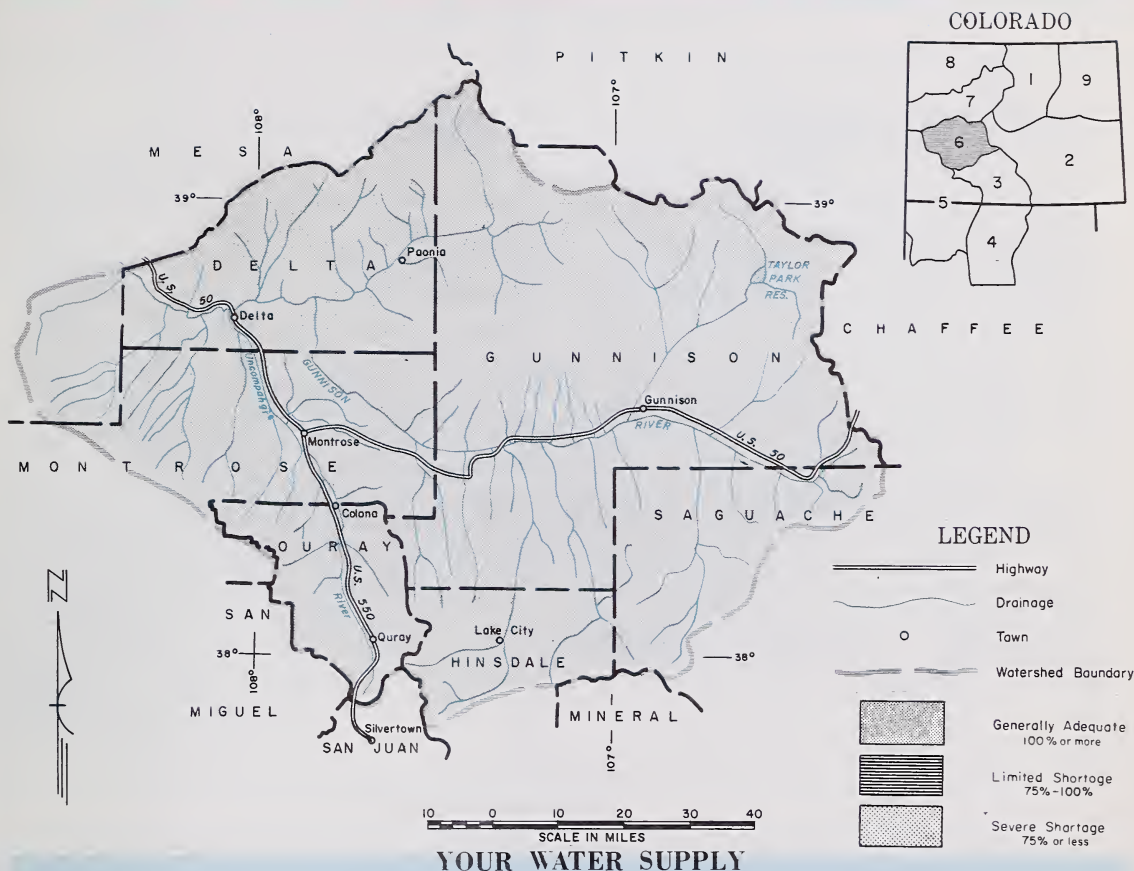
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# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE GUNNISON RIVER WATERSHED IN COLORADO

as of  
February 1, 1969

**U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE**  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



## YOUR WATER SUPPLY

THE GUNNISON AND ITS TRIBUTARIES HAVE EXCELLENT SNOW COVER. THE GRAND MESA IS NEARING RECORD SNOW PACK. THE GUNNISON ITSELF IS 125% OF THE 1953-67 AVERAGE. SOIL MOISTURE CONDITIONS IN THE MOUNTAIN AREA IS NEAR NORMAL. VALLEY SOILS ARE REPORTED TO BE IN GOOD CONDITION. TAYLOR RESERVOIR CONTAINS 37,600 ACRE-FEET WHICH IS SLIGHTLY LESS THAN NORMAL. BLUE MESA CONTAINS 554,000 ACRE-FEET AND IS FILLING.

This report prepared by  
JACK N. WASHICHEK and RONALD E. MORELAND  
SOIL CONSERVATION SERVICE, COLORADO STATE UNIVERSITY  
FORT COLLINS, COLORADO

Issued by  
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U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE  
DENVER, COLORADO  
GRAND JUNCTION, COLORADO

*The Conservation of Water begins with the Snow Survey*



# STREAMFLOW FORECASTS (1,000 Ac. Ft.) Apr-Sept

STREAM and STATION	FORECAST	THIS YEAR % AVE.	15 YR. AVE. 1953-67
No Numerical Forecasts Issued until March 1, 1969			

# WATER SUPPLY OUTLOOK expressed "Poor,Avg,Good "

STREAM	FLOW PERIOD	
	April May	June Thru Sept.
North Fork of Gunnison Taylor	Good Good	Good Good

## SUMMARY of SNOW MEASUREMENTS

RIVER	NUMBER of COURSES AVERAGED	THIS YEARS SNOW AS PERCENT OF	
		Last Year	Average
Gunnison	8	142	125
Surface Creek	3	160	153
Uncompahgre	3	121	137

## AVAILABLE SOIL MOISTURE

RIVER BASIN	NUMBER of STATIONS	THIS YEARS MOISTURE AS PERCENT OF	
		Last Year	Average
Gunnison	1	78	111
Surface Creek	1	96	91
Uncompahgre	1	96	91

## RESERVOIR STORAGE ( 1,000 Ac. Ft. ) Measured First of Month

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Blue Mesa	941.0	554.2	384.0	- -
Taylor	106.2	37.6	54.5	53.8

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67

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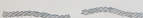
# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE COLORADO RIVER WATERSHED IN COLORADO

as of

February 1, 1969

U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO

## LEGEND

-  Highway
-  Drainage
-  Town
-  Watershed Boundary



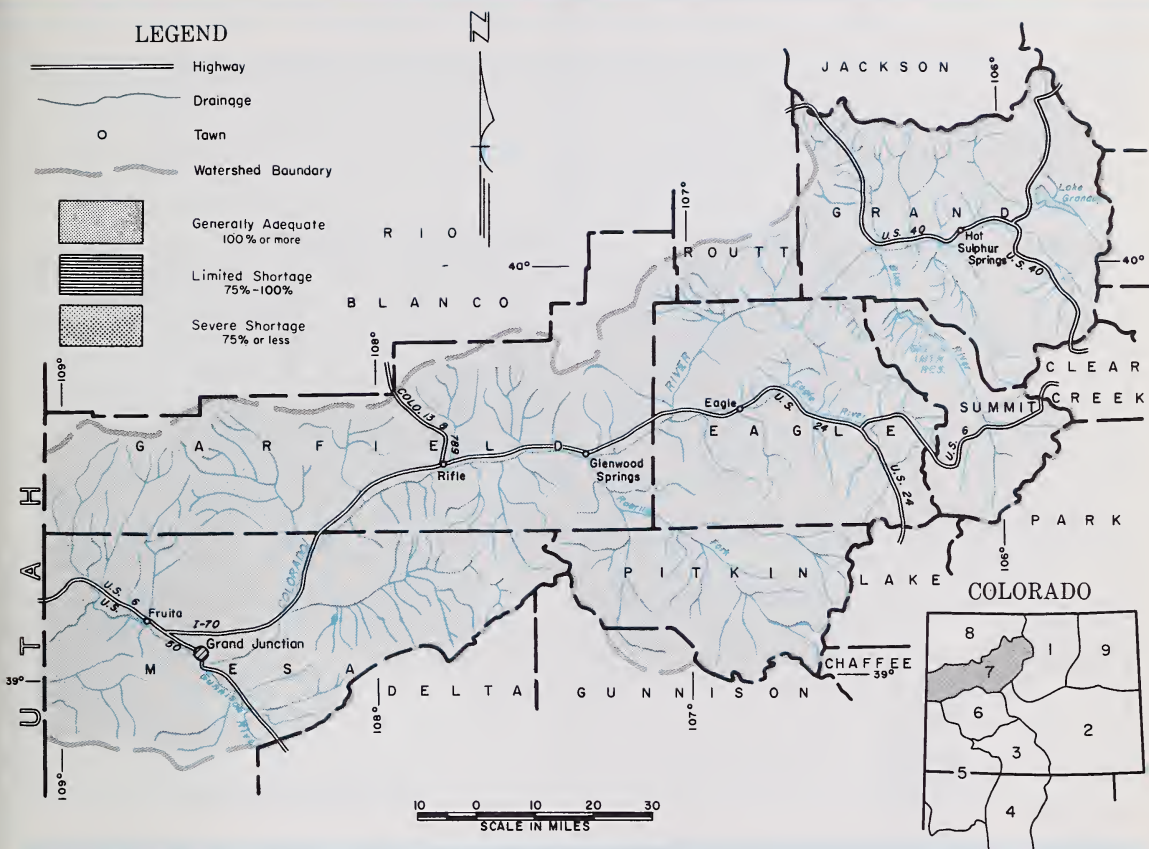
Generally Adequate  
100% or more



Limited Shortage  
75%-100%



Severe Shortage  
75% or less



## YOUR WATER SUPPLY

SNOW PACK ON THE MAINSTEM OF THE COLORADO IS ABOVE NORMAL. THE SMALLER TRIBUTARIES HAVE ABOUT 130% OF NORMAL PACK WHICH IS ABOUT THE SAME AS THE MAINSTEM. SOIL MOISTURE MEASURED BY MOUNTAIN STATIONS INDICATE NEAR NORMAL CONDITIONS. CARRY-OVER STORAGE FOR THE COLORADO BASIN IS SLIGHTLY ABOVE NORMAL. IF THE SNOW CONTINUES AT A NORMAL RATE, WATER SUPPLIES SHOULD BE ADEQUATE THIS SUMMER.

This report prepared by

JACK H. WASHICHEK and RONALD E. MORELAND  
SOIL CONSERVATION SERVICE, COLORADO STATE UNIVERSITY  
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DENVER, COLORADO      GLENWOOD SPRINGS, COLORADO      GRAND JUNCTION, COLORADO

*The Conservation of Water begins with the Snow Survey*

# STREAMFLOW FORECASTS (1,000 Ac. Ft.) Apr-Sept

# WATER SUPPLY OUTLOOK expressed "Poor,Avg,Good "

STREAM and STATION	FORE CAST	THIS YEAR % AVE.	15 YR. AVE. 1953-67
No Numerical Forecasts Issued until March 1, 1969			
(10) Observed flow plus change in storage in Dillon Reservoir. (11) Observed flow diversions by Adams Tunnel and Grand River Ditch plus change in storage in Granby Reservoir. (12) Observed flow plus the changes as indicated in (11) plus Moffat Ditch. (14) Observed flow plus diversion through Twin Lakes Tunnel. (15) Observed flow plus diversions through Jones Pass Tunnel.			

STREAM	FLOW PERIOD	
	April May	June Thru Sept.
Brush Creek	Good	Good
Eagle River	Good	Good
Gypsum Creek	Good	Good

## SUMMARY of SNOW MEASUREMENTS

RIVER	NUMBER of COURSES AVERAGED	THIS YEARS SNOW AS PERCENT OF	
		Last Year	Average
Blue River	7	129	126
Colorado	18	120	128
Roaring Fork	7	138	131
Williams Fork	3	128	135
Willow	2	147	128
Plateau	3	164	153

## AVAILABLE SOIL MOISTURE

RIVER BASIN	NUMBER of STATIONS	THIS YEARS MOISTURE AS PERCENT OF	
		Last Year	Average
Blue River	1	117	96
Colorado	4	101	94
Roaring Fork	1	96	98
Willow	1	92	92

## RESERVOIR STORAGE (1,000 Ac. Ft.) Measured First of Month

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Dillon	254.0	240.1	229.2	130.9
Granby	465.5	166.1	137.3	253.6
Green Mountain	146.9	86.3	90.6	72.5

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Williams Fork	96.8	36.9	30.2	32.5
Willow Creek	9.0	6.6	6.4	- -
Vega	32.1	10.0	1.9	10.5

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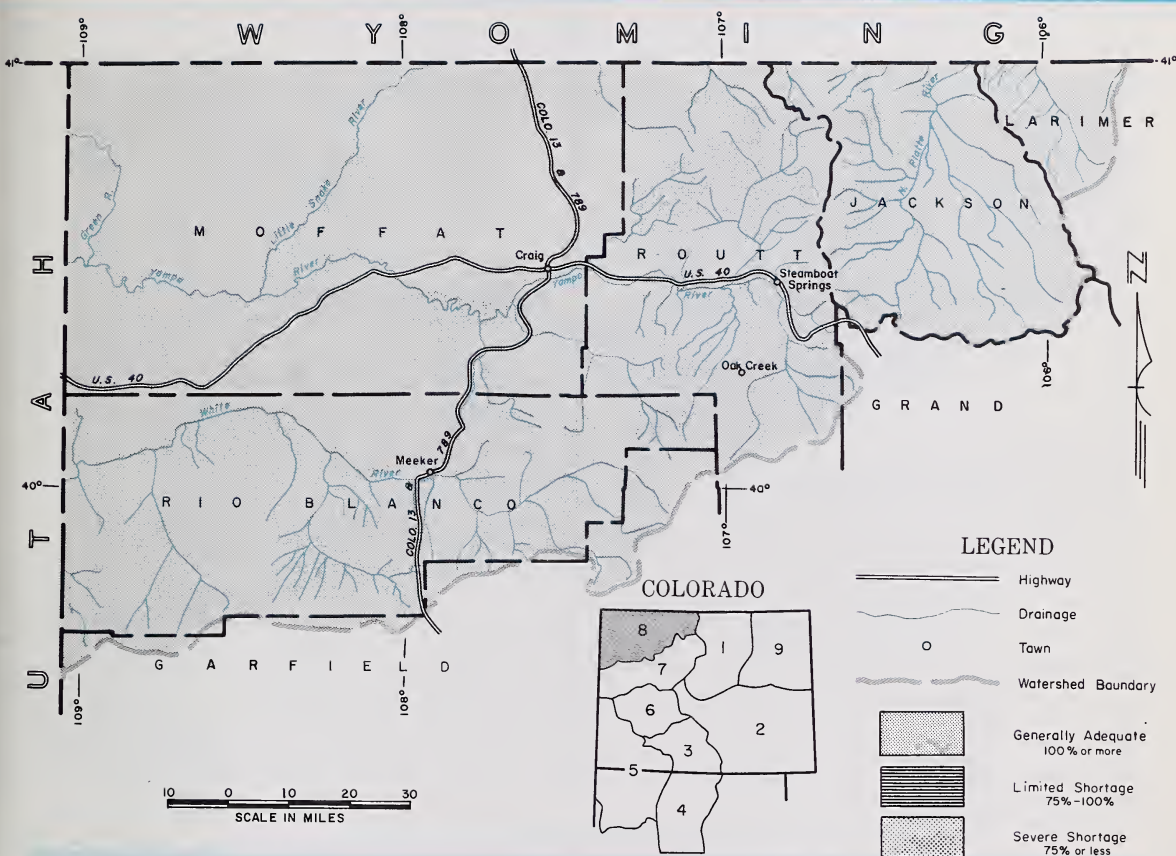
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# WATER SUPPLY OUTLOOK FOR THE SOIL CONSERVATION DISTRICTS IN THE YAMPA, WHITE, AND NORTH PLATTE RIVER WATERSHEDS IN COLORADO

as of  
February 1, 1969

U. S. DEPARTMENT OF AGRICULTURE · SOIL CONSERVATION SERVICE  
COLORADO EXPERIMENT STATION, STATE ENGINEERS OF COLORADO AND NEW MEXICO



## YOUR WATER SUPPLY

THE NORTHWEST CORNER OF THE STATE HAS EXCELLENT SNOW COVER. THE ELK, NORTH PLATTE, YAMPA AND THE WHITE RIVERS ALL HAVE ABOUT 135% OF THE 1953-67 AVERAGE. THE LARAMIE HAS ONLY 114% OF NORMAL SNOW PACK. MOUNTAIN SOILS CONTAIN ABOUT NORMAL AMOUNTS OF MOISTURE. IF NORMAL SNOWFALL CONTINUES FOR THE REMAINDER OF THE YEAR, WATER SUPPLIES SHOULD BE ADEQUATE THIS SUMMER.

This report prepared by

JACK N. WASHICHEK and RONALD E. MORELAND  
SOIL CONSERVATION SERVICE, COLORADO STATE UNIVERSITY  
FORT COLLINS, COLORADO

Issued by

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DENVER, COLORADO GLENWOOD SPRINGS, COLORADO

*The Conservation of Water begins with the Snow Survey*



# STREAMFLOW FORECASTS (1,000 Ac. Ft.) Apr-Sept

STREAM and STATION	FORE CAST	THIS YEAR % AVE.	15 YR. AVE. 1953-67
No Numerical Forecasts Issued until March 1, 1969			

# WATER SUPPLY OUTLOOK expressed "Poor,Avg,Good "

STREAM	FLOW PERIOD	
	April May	June Thru Sept.
Canadian River	Good	Avg.
Hunt Creek	Good	Avg.
Illinois River	Good	Avg.
Michigan River	Good	Avg.
Oak Creek	Good	Avg.
Trout Creek	Good	Avg.

## SUMMARY of SNOW MEASUREMENTS

RIVER	NUMBER of COURSES AVERAGED	THIS YEARS SNOW AS PERCENT OF	
		Last Year	Average
Elk	2	138	131
Laramie	2	---	114
North Platte	5	138	142
White	2	137	139
Yampa	5	124	133

## AVAILABLE SOIL MOISTURE

RIVER BASIN	NUMBER of STATIONS	THIS YEARS MOISTURE AS PERCENT OF	
		Last Year	Average
Laramie	2	94	85
North Platte	2	95	90
Yampa	1	147	74

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# STREAMFLOW FORECASTS (1,000 Ac. Ft.) Apr - Sept

# WATER SUPPLY OUTLOOK expressed "Poor,Avg,Good "

STREAM and STATION	FORE CAST	THIS YEAR % AVE.	IS YR. AVE. 1953-67
No Numerical Forecasts Issued until March 1, 1969			

STREAM	FLOW PERIOD	
	April May	June Thru Sept.
South Platte from Greeley to Fort Morgan	Avg.	Avg.
South Platte from Fort Morgan to Sterling	Avg.	Avg.
South Platte below Sterling	Avg.	Avg.

## SUMMARY of SNOW MEASUREMENTS

RIVER	NUMBER of COURSES AVERAGED	THIS YEARS SNOW AS PERCENT OF	
		Last Year	Average
Boulder	2	71	91
Big Thompson	5	99	105
Cache La Poudre	6	113	127
Clear Creek	6	109	109
Saint Vrain	2	81	108
South Platte	2	100	100

## AVAILABLE SOIL MOISTURE

RIVER BASIN	NUMBER of STATIONS	THIS YEARS MOISTURE AS PERCENT OF	
		Last Year	Average
South Platte	2	99	93
Clear Creek	2	80	86
Boulder	1	75	105
Saint Vrain	2	77	100
Big Thompson	3	89	91
Cache La Poudre	2	94	85

## RESERVOIR STORAGE (1,000 Ac. Ft.) Measured First of Month

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Carter	108.9	79.5	85.2	61.9
Cheeseman	79.0	39.8	38.4	45.6
Eleven Mile	97.8	95.0	92.3	72.0
Empire	37.7	26.0	26.0	22.3
Horsetooth	143.5	90.2	85.4	81.2

RESERVOIR	USABLE CAPACITY	THIS YEAR	LAST YEAR	15 YEAR AVE. 1953-67
Jackson	35.4	27.4	28.0	27.4
Julesburg	28.2	20.5	20.5	20.0
Prewitt	32.8	9.0	20.2	11.4
Point of Rocks	70.0	50.6	46.7	43.2
Riverside	57.5	27.2	28.0	38.7

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# APPENDIX I

SNOW COURSE MEASUREMENTS as of February 1, 1969

CURRENT INFORMATION					PAST RECORD	
SNOW COURSE	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT (INCHES)		
				LAST YEAR	AVG. 53-67	
NORTH PLATTE BASIN						
<u>Laramie River</u>						
Deadman Hill (A)	2/5	43	10.5	-	8.7	
McIntyre	NS			-	-	
Roach	1/26	42	9.9	-	9.8	
<u>North Platte River</u>						
Cameron Pass	1/27	61	20.3	15.9	12.9	
Columbine Lodge	1/31	62	17.9	14.2	13.6	
North Gate	1/27	26	5.3	2.5	3.6	
Park View	1/28	38	7.4	5.0	5.2	
Willow Cr. Pass (B)	1/28	44	9.4	6.2	7.1	
SOUTH PLATTE BASIN						
<u>Boulder Creek</u>						
Boulder Falls	1/29	29	7.1	10.1	6.6	
University Camp	1/29	34	8.9	12.5	10.9	
<u>Big Thompson River</u>						
Deer Ridge	1/31	14	2.4	3.3	2.6	
Hidden Valley	1/31	31	6.6	6.0	5.9	
Lake Irene (B)	1/29	53	13.2	12.4	13.0	
Long's Peak	2/1	28	5.4	6.7	5.6	
Two Mile	1/31	40	9.1	8.7	7.9	
<u>Cache La Poudre</u>						
Bennett Creek	1/27	21	3.9	5.3	-	
Big South	2/2	5	0.8	0.9	1.6	
Cameron Pass	1/27	61	20.3	15.9	12.9	
Chambers Lake	2/2	23	6.2	5.4	5.2	
Deadman Hill (A)	2/5	43	10.5	-	8.7	
Hour Glass Lake	NS			-	3.1	
Joe Wright	1/27	55	15.8	13.4	-	
Lost Lake	2/1	34	7.5	5.8	7.2	
Pine Creek	1/29	7	0.8	2.4	1.2	
Red Feather	1/29	20	5.0	5.5	3.8	
<u>Clear Creek</u>						
Baltimore	1/30	19	4.0	6.0	5.2	
Berthoud Falls	1/30	37	8.2	8.6	8.0	
Empire	1/30	18	3.4	4.7	4.3	
Grizzly Peak (B)	1/29	56	12.0	10.2	9.8	
Loveland Lift	1/30	59	14.2	11.4	12.9	
Loveland Pass	1/30	48	11.0	7.6	8.5	
<u>Saint Vrain River</u>						
Copeland Lake	1/31	16	3.0	3.9	2.6	
Ward	1/29	18	3.5	4.1	3.4	
Wild Basin	NS			8.3	9.7	
<u>South Platte River</u>						
Como	1/29	22	4.5	4.0	-	
Geneva Park	1/31	15	2.6	2.4	2.7	
Horseshoe Mountain	1/28	36	6.7	5.2	-	
Hoosier Pass	1/28	36	7.2	7.8	7.6	
Jefferson Creek	1/29	29	6.0	5.3	5.7	
Mosquito	1/28	35	6.7	5.0	-	
Trout Creek Pass	1/27	18	3.6	3.0	-	
ARKANSAS BASIN						
<u>Arkansas River</u>						
Bigelow Divide	NS			-	-	
Cooper Hill (B)	1/28	43	7.6	7.0	-	
East Fork	1/30	36	7.2	6.1	5.6	
Four Mile Park	1/29	27	4.4	3.4	3.5	
Fremont Pass	1/30	48	10.5	9.5	9.5	
Garfield	1/31	38	9.2	7.4	8.4	
Monarch Pass	1/31	49	12.3	8.2	10.3	
Tennessee Pass	1/29	39	7.7	5.9	6.2	
Twin Lakes Tunnel	1/31	27	6.2	5.7	6.0	
Westcliffe	1/30	26	4.8	-	-	
CUCHARAS RIVER						
<u>Cucharas River</u>						
Blue Lakes	NS			-	2.3	
Cucharas Pass	1/30	16	3.3	6.6	-	
LaVeta Pass (B)	1/30	23	4.8	6.4	6.2	
<u>Purgatorie River</u>						
Bourbon	1/29	25	3.0	-	-	
RIO GRANDE BASIN-COLO						
<u>Alamosa River</u>						
Silver Lakes	1/30	33	5.8	6.6	3.9	
Summitville (A)	1/30	52	15.2	12.4	11.6	
<u>Conejos River</u>						
Cumbres (A)	1/30	80	21.2	12.0	13.2	
Platoro (A)	1/30	69	13.3	15.7	12.9	
River Springs	1/29	33	5.4	3.0	4.8	
<u>Culebra River</u>						
Brown Cabin	1/30	12	4.2	3.4	-	
Cottonwood (B)	1/31	12	3.8	-	-	
Culebra (A)	1/30	18	3.6	6.5	5.7	
LaVeta Pass (B)	1/30	23	4.8	6.4	6.2	
Trinchera (B)	1/30	23	5.8	5.5	-	
<u>Rio Grande</u>						
Cochetopa Pass	1/28	18	2.5	4.9	3.4	
Grayback	NS			-	-	
Hiway	1/30	78	18.8	17.3	15.7	
Lake Humphrey	1/29	20	3.8	3.8	5.6	
Love Lake (A)	1/30	15	2.8	3.7	-	
Pass Creek	1/30	45	8.8	12.3	8.9	
Pool Table	1/29	16	2.4	7.8	6.1	
Porcupine	1/31	30	5.7	9.3	8.2	
Santa Maria	1/30	18	3.3	6.5	3.4	
Upper Rio Grande	1/28	29	5.7	9.0	5.4	
Wolf Creek Pass	1/30	89	23.1	19.7	17.8	
Wolf Cr. Summit (B)	1/30	90	21.3	19.2	17.7	
RIO GRANDE BASIN-N.M.						
<u>Pecos River</u>						
Panchuelo	1/29	11	2.2	3.5	2.6	
<u>Rio Chama</u>						
Bateman				-	7.0	
Capulin Peak	1/29	24	4.8	3.9	3.3	
Chama Divide	1/30	19	5.2	2.5	3.3	
Chamita	1/29	47	11.1	4.4	5.0	
<u>Rio Grande</u>						
Aspen Grove	NS			-	3.5	
Big Tesuque	1/29	18	3.8	4.9	3.7	
Bluebird Mesa	1/28	17	4.6	4.8	3.8	
Cordova (A)	1/30	48	10.0	4.1	6.3	
Elk Cabin	1/30	7	2.0	3.7	2.9	
Fenton Hill	1/30	19	5.5	6.4	3.0	
Mora View	1/20	6	1.0	3.2	-	
Pajarito Peak	1/29	3	0.6	0.9	1.3	
Payrole (A)	1/30	46	9.8	4.3	5.9	
Quemazon	1/30	30	5.8	6.4	6.5	
Rio En Medio	1/29	26	2.6	5.0	6.1	
Sandoval	1/30	16	3.0	5.0	3.7	
Taos Canyon	1/28	22	4.1	3.3	3.4	
Tres Ritos	1/28	17	3.9	4.0	3.5	
<u>Rio Hondo</u>						
Twinning	1/28	30	7.8	9.2	-	
<u>Red River</u>						
Hematite Park (B)	1/27	9	1.3	3.4	3.4	
Red River	1/27	15	2.9	4.4	4.4	

NOTE: NS - No Survey  
(A) - Air observed  
(B) - On adjacent drainage



# APPENDIX I

## SNOW COURSE MEASUREMENTS as of February 1, 1969

SNOW COURSE	CURRENT INFORMATION			PAST RECORD	
	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT (INCHES)	
				LAST YEAR	53-67
SAN JUAN-DOLORES BASIN					
<u>Animas River</u>					
Cascade	1/30	61	13.3	12.6	8.0
Lemon	1/31	47	9.5	-	-
Mineral Creek	1/30	56	13.3	11.7	8.9
Molas Lake	1/30	55	12.5	10.1	8.4
Purgatory	1/29	77	16.5	20.4	-
Red Mountain Pass	1/30	86	23.3	14.7	17.0
Silverton Sub-Sta.	1/30	37	8.5	8.2	4.8
Spud Mountain	1/30	86	21.7	19.2	15.0
<u>Dolores River</u>					
Lizzard Head	1/29	60	14.2	12.1	9.4
Lone Cone	1/30	60	14.1	11.6	-
Rico	1/29	48	10.6	7.6	5.0
Telluride	1/29	28	5.9	4.5	4.5
Trout Lake	1/29	52	11.1	10.3	7.6
<u>San Juan River</u>					
Chama Divide (B)	1/30	19	5.2	2.5	3.3
Chamita (B)	1/29	47	11.1	4.4	5.0
Upper San Juan	1/30	102	26.7	21.9	19.4
Wolf Cr. Pass (B)	1/30	89	23.1	19.7	17.8
Wolf Cr. Summit	1/30	90	21.3	19.2	17.7
GUNNISON BASIN					
<u>Gunnison River</u>					
Alexander Lake	EST.	65	18.2	12.1	11.5
Black Mesa	NS			-	-
Blue Mesa	NS			-	-
Butte	1/30	60	12.0	9.0	-
Cochetopa Pass (B)	1/28	18	2.5	4.9	3.4
Crested Butte	1/29	60	11.7	7.9	7.5
Keystone	1/28	77	15.5	9.7	12.6
Lake City	1/27	29	4.2	-	-
Long Draw	NS			-	-
Mesa Lakes (B)	1/29	57	15.8	9.5	10.3
McClure Pass	1/28	54	11.8	10.5	11.6
Park Cone	1/30	47	9.1	4.7	6.2
Park Reservoir	EST	75	21.0	13.0	14.1
Porphyry Creek	1/31	44	10.5	7.0	10.1
Tomichi	1/31	40	9.6	6.9	7.5
<u>Surface Creek</u>					
Alexander Lake	EST.	65	18.2	12.1	11.5
Mesa Lakes (B)	1/29	57	15.8	9.5	10.3
Park Reservoir	EST.	75	21.0	13.0	14.1
<u>Uncompahgre River</u>					
Ironton Park	1/30	41	10.7	8.2	7.6
Red Mountain Pass	1/30	86	23.3	20.4	17.0
Telluride (B)	1/29	28	5.9	4.5	4.5
COLORADO BASIN					
<u>Blue River</u>					
Blue River	1/28	31	6.4	5.1	5.1
Fremont Pass	1/30	48	10.5	9.5	9.5
Frisco	1/30	28	6.3	3.4	4.3
Grizzly Peak	1/29	56	12.0	10.2	9.8
Hoosier Pass (B)	1/28	36	7.2	7.8	7.6
Shrine Pass	1/29	58	14.4	8.5	9.6
Snake River	1/29	38	7.4	5.2	4.9
Summit Ranch	NS			-	4.4

SNOW COURSE	CURRENT INFORMATION			PAST RECORD	
	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT (INCHES)	
				LAST YEAR	AVG. YEAR 53-67
<u>Colorado River</u>					
Arrow	1/29	40	9.0	9.3	6.4
Berthoud Pass	1/28	41	9.3	11.4	8.3
Berthoud Summit	1/30	42	9.5	11.6	10.8
Cooper Hill	1/28	43	7.6	7.0	-
Fiddler Gulch	NS			8.8	8.7
Glenmar Ranch	1/29	31	6.6	4.2	4.7
Gore Pass	1/29	38	8.7	6.7	5.9
Grand Lake	1/29	37	7.3	4.9	4.8
Lake Irene	1/29	53	13.2	12.4	13.0
Lapland	1/29	34	6.2	-	-
Lulu	NS			-	-
Lynx Pass	1/29	46	10.5	7.9	6.6
McKenzie Gulch	1/28	33	8.1	3.2	3.4
Middle Fork	1/29	34	7.3	5.0	5.4
Milner	1/29	47	10.8	8.5	8.7
North Inlet	1/28	33	6.7	5.3	5.3
Pando	1/30	37	8.3	5.8	5.7
Phantom Valley	1/29	40	9.0	5.7	6.1
Ranch Creek	1/29	33	6.7	6.9	5.1
Tennessee Pass (B)	1/29	39	7.7	5.9	6.2
Vail Pass	1/29	53	12.3	9.2	10.0
Vasquez	1/29	37	7.4	8.4	6.9
<u>Roaring Fork River</u>					
Aspen	1/28	64	12.5	8.5	8.9
Chapman	1/30	52	10.8	6.4	-
Independence Pass	1/31	50	11.8	9.1	9.5
Ivanhoe	1/31	54	12.5	9.9	9.6
Kiln	1/31	48	10.2	6.5	-
Last Chance	1/30	40	8.1	4.8	-
Lift	1/28	58	12.7	8.8	10.3
McClure Pass	1/28	54	11.8	10.5	11.6
Nast	1/30	34	6.4	3.3	3.7
North Lost Tr.	1/29	71	15.1	9.9	9.5
<u>Williams Fork River</u>					
Glenmar Ranch	1/29	31	6.6	4.2	4.7
Jones Pass	1/28	48	10.3	9.7	7.8
Middle Fork	1/29	34	7.3	5.0	5.4
<u>Willow Creek</u>					
Granby	1/28	30	5.6	4.0	4.6
Willow Cr. Pass	1/28	44	9.4	6.2	7.1
<u>Plateau Creek</u>					
Mesa Lakes	1/29	57	15.8	9.5	10.3
Park Reservoir	EST.	75	21.0	13.0	14.1
Trickle Divide	EST.	84	24.0	14.5	15.3
YAMPA BASIN					
<u>Elk River</u>					
Clark	1/30	46	11.0	5.7	8.3
Elk River	1/30	52	14.5	12.8	11.1
Hahn's Peak	1/30	50	12.9	10.6	-
<u>White River</u>					
Burro Mountain	1/30	56	14.6	11.2	10.7
Rio Blanco	1/28	52	12.6	8.6	8.9
<u>Yampa River</u>					
Bear River	NS			-	-
Columbine Lodge(B)	1/31	62	17.9	14.2	13.6
Dry Lake	1/29	58	14.5	13.0	12.2
Lynx Pass (B)	1/29	46	10.5	7.9	6.6
Rabbit Ears	1/31	70	20.4	16.1	15.9
Yampa View	1/31	47	12.6	10.1	8.8

NS - No Survey  
(A) - Air observed  
(B) - On adjacent drainage

# APPENDIX II

SOIL MOISTURE MEASUREMENTS as of February 1, 1969

STATION	DATE OF SURVEY	CAPACITY (INCHES)	THIS YEAR	LAST YEAR	AVG. ALL DATA
NORTH PLATTE BASIN					
<u>North Platte River</u>					
Muddy Pass	11/5/68	11.1	6.1	6.2	6.4
Willow Pass	11/13/68	9.5	5.7	6.2	6.7
SOUTH PLATTE BASIN					
<u>Boulder Creek</u>					
Alpine Camp	12/11/68	6.9	3.9	5.2	3.7
<u>Big Thompson River</u>					
Beaver Dam	12/11/68	7.1	3.6	4.6	3.8
Guard Station	12/11/68	6.9	2.9	3.5	3.4
Two Mile	12/11/68	9.1	5.1	5.0	5.5
<u>Clear Creek</u>					
Clear Creek	12/26/68	9.5	5.7	7.7	7.1
Hoop Creek	12/26/68	4.9	2.9	3.0	2.9
<u>Cache La Poudre River</u>					
Feather	12/10/68	10.1	4.0	4.5	4.5
Laramie Road	9/25/68	12.4	6.5	6.6	7.8
<u>South Platte River</u>					
Hoosier Pass	11/12/68	7.8	4.7	4.8	4.9
Kenosha Pass	11/12/68	4.4	2.3	2.3	2.6
ARKANSAS BASIN					
<u>Arkansas River</u>					
Garfield	11/12/68	6.7	3.1	6.0	3.9
Leadville	12/26/68	7.8	4.0	5.7	4.2
Twin Lakes Tunnel	11/8/68	4.5	0.9	2.8	2.3
RIO GRANDE BASIN-Colo.					
<u>Conejos River</u>					
Mogote	10/29/68	10.7	4.7	6.3	5.5
<u>Rio Grande</u>					
Alberta Park	10/24/68	8.2	4.9	6.2	5.0
Bristol View	10/24/68	6.1	2.9	2.4	3.9
LaVeta Pass	10/16/68	11.9	10.0	10.0	7.2
RIO GRANDE BASIN-N.M.					
<u>Rio Chama</u>					
Bateman	10/18/68	6.7	2.1	4.1	2.5
Chamita	10/22/68	8.0	5.0	5.0	2.4
<u>Rio Grande</u>					
Aqua Piedra	10/30/68	7.2	3.9	2.5	3.1
Big Tesuque	11/29/68	3.7	0.9	2.3	1.5
Fenton Hill	11/29/68	6.5	2.1	4.7	3.8
Rio En Medio	11/18/68	3.5	0.9	2.2	1.4
Tao Canyon	10/30/68	3.3	2.0	2.5	2.3
<u>Red River</u>					
Red Summit	10/30/68	4.8	1.8	1.5	2.2
ANIMAS - SAN JUAN BASINS					
<u>Animas River</u>					
Cascade	11/12/68	9.1	3.3	5.9	6.3
Mineral Creek	11/12/68	5.7	2.1	3.8	3.7
Molas Lake	11/12/68	9.4	3.0	6.2	4.6
<u>Dolores River</u>					
Dolores	11/12/68	19.6	9.8	12.7	6.7
Lizzard Head	11/12/68	11.8	3.7	7.6	8.3
Rico	11/12/68	13.8	5.5	11.1	9.9

# APPENDIX II

SOIL MOISTURE MEASUREMENTS as of February 1, 1969

STATION	DATE OF SURVEY	CAPACITY (INCHES)	THIS YEAR	LAST YEAR	AVG. ALL DATA
GUNNISON BASIN					
<u>Gunnison River</u> King	11/12/68	3.3	2.1	2.7	1.9
COLORADO BASIN (Mainstem)					
<u>Blue River</u> Blue River	11/12/68	4.2	2.7	2.3	2.8
<u>Colorado River</u> Berthoud Pass	11/18/68	3.9	1.9	2.9	2.8
Gore	NS	4.9	-	2.3	2.5
Grand Mesa	10/18/68	12.5	8.5	8.9	9.3
Ranch Creek	11/14/68	8.7	5.0	5.1	6.0
Vail	12/28/68	12.3	8.1	6.4	6.9
<u>Roaring Fork River</u> Placita	11/14/68	9.3	5.1	5.3	5.2
YAMPA BASIN					
<u>Yampa River</u> Hahn's Peak	11/5/68	19.0	8.7	5.9	11.8



# LIST of COOPERATORS

The following organizations cooperate in snow surveys for the Colorado, Platte, Arkansas and Rio Grande watersheds. Many other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

## STATE

Colorado State Engineer  
New Mexico State Engineer  
Nebraska State Engineer  
Colorado Experiment Station  
Rocky Mountain Forest and Range Experiment Station

## FEDERAL

Department of Agriculture

Forest Service  
Soil Conservation Service

Department of Interior

Bureau of Reclamation  
Geological Survey  
National Park Service  
Indian Service

Department of Commerce

Weather Bureau

War Department

Army Engineer Corps

Atomic Energy Commission

## INVESTOR OWNED UTILITIES

Colorado Public Service Company  
Public Service Company of New Mexico

## MUNICIPALITIES

City of Denver                      City of Greeley  
City of Boulder                      City of Fort Collins

## WATER USERS ORGANIZATIONS

Arkansas Valley Ditch Association  
Colorado River Water Conservation District

## IRRIGATION PROJECTS

Farmers Reservoir and Irrigation Company  
San Luis Valley Irrigation District  
Santa Maria Reservoir Company  
Costilla Land Company  
Uncompahgre Valley Water Users' Association  
Twin Lakes Reservoir and Canal Company  
Trinchera Irrigation Co.

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